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ABSTRACT

The Integrated Contextual Learning (ICL) alternative learning methodology is examined as to the impact it can have on the preparation of future managers. The state of business education is reviewed noting criticism that business schools are too theoretical and out of touch with business realities. The ICL is a methodology derivative of Reiterative Problem-Based Learning and follows concepts of cognitive apprenticeship. Students are presented with an ill-structured problem situation and are assigned to set the problem and decide on appropriate action. Students formulate the problem collectively, engage in research and self-directed study individually, address the problem again collectively, and continue these iterations as appropriate. The faculty member selects appropriate learning problem-situations and acts as learning manager, coach, and model. A sample learning problem is offered with a summary of group learning activities during ICL implementation at Ohio University. Additionally, the report shows how ICL develops desirable managerial capabilities and discusses the difficulties of incorporating ICL into business schools. Contains six references. (GLR)

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INTEGRATED CONTEXTUAL LEARNING: SITUATED LEARNING IN THE BUSINESS PROFESSION

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INTEGRATED CONTEXTUAL LEARNING: SITUATED LEARNING IN THE BUSINESS PROFESSION

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How should we educate tomorrow's manager? That question is much on the mind of the faculty and administrators of our business schools. The students we are teaching now will be the leaders of the business world within two or three decades. Are we giving them the background they need? Are they receiving a strong base of knowledge on which to build? Will they be capable of providing the strong leadership needed in a world that may be quite different from what we experience today? There is more than a little concern.

This paper concentrates on the impact that an alternative learning methodology, Integrated Contextual Learning(ICL), can have on the preparation of future managers. We will briefly examine the state of business education, describe ICL and its use, show how that ICL develops desirable managerial capabilities, and discuss the difficulties of incorporating ICL into business schools.

THE STATE OF BUSINESS EDUCATION

In recent years, the popular business press has published several reports critical of business education. Business schools have been chastised for being too theoretical and out of touch with business realities, for producing narrow-minded technicians who lack interpersonal and communication skills, and for concentrating on esoteric research which has little if anything to do with the business world.

While some of the reports are sensationalized and demonstrate a lack of understanding of both business schools and the business world, there is merit to the concerns expressed. Most business schools, including ours, have heard from members of their executive advisory boards, that graduates are not well prepared for the business world. They note that graduates do not have a realistic understanding of the business world, they criticize graduates for ineffective communication skills, they note the lack of leadership

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skills, and they comment on the need to train new graduates, teaching them concepts they supposedly learned in school.

Similar concerns were expressed in the Business-Higher Education Forum in its May 1985 report to President Reagan, ***America's Business Schools: Priorities for Change***. After reviewing the concerns, the forum made several recommendations regarding curriculum and teaching methods. The following are of particular note:

> "Objectives should be focused not only on the acquisition of a body of basic knowledge, but more importantly on the development of analytical and personal skills so that knowledge can be applied to detecting and solving managerial challenges."(pg.13)
>
> "All observers consider these skills (oral and written communication and interpersonal relations) critical to effective management and leadership. ... because effective communications are indispensable ingredients for successful management activities in all areas - from problem solving to negotiations - skill training in these disciplines should be incorporated throughout the entire curriculum." (pg.16)

These concerns were reiterated in the 1988 report of the futures project sponsored by the American Assembly of Collegiate Schools of Business. The report, ***Management Education and Development: Drift or Thrust into the 21st Century?***, by Porter and McKibbin, concludes that business schools must broaden their goals if they are to effectively prepare students for professional challenges.

How should business schools respond? Business schools are starting now to make many important adjustment in their curriculum. They are starting to de-emphasize the narrow functional specialties and emphasize an integrated understanding of the enterprise as a whole. They are placing increased emphasis on world cultures, on morality, on social values, and on technology.

But, changing the curriculum alone is not sufficient; learning methodologies used must also be altered. As recent research indicates, it is impossible to effectively separate what is learned from how it is learned and used (Brown et. al., 1989). Appropriate

learning methodologies should encourage the development of the types of skills and personal characteristics needed in the business world as well as help students learn and be able to apply the required knowledge.

INTEGRATED CONTEXTUAL LEARNING

For the last four years The College of Business Administration at Ohio University has experimented with a particularly powerful species of problem-based learning, one we call Integrated Contextual Learning (ICL). It is a derivative of Reiterative Problem-Based Learning (RPBL), which was developed by Howard Barrows (Barrows, 1985), and follows closely the concepts of cognitive apprenticeship developed by Collins and his colleagues (Collins et. al., 1990).

The learning methodology used in ICL is very similar to that of RPBL. Students are presented with an ill-structured problem-situation, without the benefit of prior preparation, and challenged to set the problem and decide upon action to be taken. Problem/situations may be presented in a number of different formats. Some are elaborate simulations of companies and industries while others are extended "Harvard-type" cases. Some are real-life situations presented by cooperating companies while still others are current situations reported in the business press.

During the initial discussion of the problem, students are challenged to evaluate the knowledge they already have that relates to the problem-situation and to identify the knowledge they will need to acquire through inquiry, research, and self-directed study. A faculty tutor keeps the students on process, not by giving information or judgments but by asking questions. The first phase ends when students have committed themselves to the nature of the problem and how it is to be managed and have identified the areas they are going to study and the resources they plan to use in the study.

During the first phase, then, students will have (1) set learning objectives, (2) set the problem, (3) developed hypotheses about action based on present knowledge, (4) noted actual knowledge they possess, (5) identified information needed, and (6) identified potential information sources. They are then released for a period of inquiry, research, and self-directed study.

At the beginning of the next iteration, students are asked to critique the resources they used to obtain information and the results of their self-directed learning is directly addressed. They then address the problem-situation again, using the knowledge and skill that they obtained through their research. For a second time they set the problem and develop hypotheses about action to be taken.

Students may have enough knowledge and skill to make a decision at this point, or they may raise additional learning issues that should be addressed before action is taken. The number of iterations necessary depends on the complexity of the problem-situation and the associated learning objectives.

As the final step in the process or intermittently during longer processes, students are asked to verbalize and synthesize what they have learned. Because so much of the learning is associated with problem-solving, students may not be consciously aware of all they have learned. Further, they have developed their knowledge within a particular context. Students thus need to make their learning explicit and decontextualize their knowledge so that it can be used in a variety of different settings.

Note that there are many variations possible in ICL. Students can work on problem-situations individually or in teams. Problem-situations can be rather simple (requiring only a short time to complete) or complex (requiring a whole quarter or semester). Students may end the process with a formal presentation of findings and recommendations to a panel of executives, or with a general group discussion which produces no single solution. These are only examples of numerous possibilities.

THE ROLE OF FACULTY IN ICL

The role of the faculty member is quite different in ICL. He or she spends very little time up front, lecturing and transferring information to students. Rather the role becomes that of a combination learning manager and coach.

The faculty member is responsible for selecting appropriate learning problem-situations. The selection of these situations is critical. They must be involving, relevant, holistic, and at the appropriate

level of complexity for the stage of the students' development. The problem-situations should be selected with specific learning opportunities identified. Further, the teacher must insure that appropriate physical resources are present. This requirement ranges from arranging for executive panels to review student presentations and provide feedback to insuring that appropriate data resources are available at the library or through electronic sources.

But the teacher is also a coach (Kraft, 1988). The teacher observes student performance, corrects poorly done performance and encourages appropriate performance. The coach/teacher "... encourages that the right way of performing be done over and over again until the requisite skill becomes a firm and stable habit of performance." (Kraft, 1988, pg. 1)

Much as happens in apprenticeship (Collins et. al., 1990), the teacher also provides a model. At appropriate times as students are involved in a learning situation or after they have completed it, the teacher provides a thorough and high quality performance so that students students can compare their performance to that of an expert. This can be personal performance by the teacher or can be a real-life or communicated performance by some other expert. Note that this model is normally not provided before students enter into the learning situation. They need some involvement, some understanding of the context, before they can benefit from modeled performance.

Finally, the teacher helps students decontextualize the learning (Collins et. al., 1990). As students express (in oral or written form) what they have learned as they have confronted the problem-situation, the teacher helps them understand how that same knowledge and skill can be used in other situations.

A SAMPLE LEARNING PROBLEM

Last summer we used a living Case to introduce new MBA students to the ICL process. The problem was, "Should Marvin Davis buy United Airlines?" The students were addressing this problem at the same time Davis Was making a bid for UAL, thus there was a great deal of currency to the process.

The learning module was started by the faculty member simply asking the 30 member class, without them having prior preparation, the question, "Should Marvin Davis buy United Airlines?" After Initial hesitation, the students started expressing opinions and ideas based on personal understanding of Davis (very limited) and UAL (Somewhat better).

As the discussion progressed, the faculty tutor gradually helped students structure their problem analysis. Two lists evolved on the Whiteboard. One we eventually entitled "What we know" and one "what we need to know." The "what we need to know" list included two types of learning issues; (1) information specific to Davis and UAL, and (2) issues of knowledge and skill that are transferable to other problem situations. At the end of the discussion, different students volunteered to research each of the Learning issues and report back to the group at the next meeting.

The next day the faculty tutor started the discussion by asking students to review the learning sources they had used; where and how they had attempted to obtain the information they needed for their learning issues. Then, the discussion turned to what they had learned.

After the learning issues had been discussed, the faculty tutor then restated the question, "Should Marvin Davis buy United Airlines?" and the process of addressing the question was reiterated.

At the conclusion of the second day's discussion, students had framed the problem analysis strategy, determined facts they knew about Davis, UAL, and the industry, and developed a second set of learning issues. At that time, the faculty tutor assigned the students to six teams of five students each and passed out a team assignment.

> "You are a task force of staff members working for Marivn Davis. You have been assigned the task of recommending whether or not Mr. Davis should purchase UAL. Two weeks from today you will make a formal presentation of your recommendations and any supporting documentation to Mr. Davis's Board. One week from today, you will make a preliminary presentation of your findings to your direct manager. "

During the two weeks the faculty tutor met several times with each team. The purpose of each of those meetings was to help the students focus on their learning. Learning objectives, learning resources, and learning outcomes were discussed. The faculty tutor did not become actively involved in the problem analysis process.

The preliminary presentations were made to the faculty tutor. The tutor asked hard questions and attempted to find holes in the presentation. At the end of the presentation, the faculty tutor facilitated a discussion of how the presentation could be improved, both in form and content. Students then redefined their learning issues and continued work on the project.

The team presentations of recommendations were made to a group of visiting executives. The executives played the role of Davis's board. At the end of their presentation and normal questions and answers, the executives either accepted or rejected the recommendation and told the team the reason(s) for their action. Students also received and evaluation of their performance and feedback from the executive panel on the quality of their presentation. The day after the presentations, there was a general debriefing of the total group. Then there was a debriefing of each team. Each team watched a video of their presentation And discussed their recommendation and supporting analysis with the faculty tutor. The debriefing focused on the quality of their analysis, the level of skills they had demonstrated, their learning outcomes, and areas of needed growth.

In addition to providing an introduction to ICL, there were several other learning outcomes from the Davis - UAL vehicle. Among those noted by students and the faculty tutor were the following:

* How to do basic business research, including how to find and use a variety of public data-bases.

* How to do the financial analysis required to determine the value of a company.

* How to analyze company strategies and determine strategic fit.

* How to frame a problem and structure a problem analysis process.

* How to make a business presentation.

* How to function as a member of a cooperative work team.

* How to start taking responsibility for personal learning.

These are but examples of learning outcomes. It should also be noted that learning continues in many of these areas. For example, students continue to develop their presentation skills as they go through the program.

INTEGRATED CONTEXTUAL LEARNING AND BUSINESS EDUCATION

Integrated Contextual Learning produces learning that is very consistent with the desired characteristics of the manager of the future. In ICL, learning is contextual. Content (or knowledge) is learned in the context in which it is used. Thus, when confronted with a similar problem/situation, student recall (associated recall) of the information is much greater than with other forms of learning. Also, while learning content, students learn how to apply the content.

The content emphasis is on the enterprise as a whole and its Relationship with its environment, not simply on one function Or discipline. Students learn about the parts of the enterprise in the context of the whole. Further, they develop a realistic orientation to the business world and the breadth of perspective necessary for future corporate citizenship - an understanding of technology, culture, and social values and their interrelationship with the enterprise.

The development of effective managerial reasoning skill and strategic thinking ability is integral to the process. The whole learning process is built upon the student using those skills as he or she confronts and manages problem-situations. Since the learning process is reiterated numerous times to develop learning in various content areas, students have ample practice opportunity to develop the skills.

The development of effective oral and written communication skills, interpersonal skills and leadership skills occurs simultaneously with the development of cognitive skills. Students frequently must

work collaboratively to manage learning problem-situations. They must repeatedly present their ideas, opinions, and recommendations in oral and written from as an integral part of the learning process.

In contrast to the typical classroom where the faculty member assumes responsibility for student learning, students take primary responsibility for their own learning. They are helped to develop self-directed learning skill - skills that they can use to continually expand and update their knowledge throughout their career. They learn how to set a problem, develop an effective inquiry strategy, and obtain needed information.

Finally, the learning process encourages the development of important personal characteristics. The learning problem-situations are, by design, ill-structured and ambiguous. Students must learn to cope with and manage ambiguity. They must function independently, taking responsibility for their own actions. They must be flexible, adapting to changing and sometimes conflicting demands. The learning process encourages the characteristics of the mature adult, not the dependent child.

INCORPORATING ICL INTO THE BUSINESS SCHOOL

We have used ICL extensively at the graduate level. A major portion of our MBA program uses ICL as the primary learning methodology. Students are confronted with an increasingly complex series of problem/situations as they progress through the program. We are now also starting to use the ICL more at the undergraduate level.

Our experience with ICL suggests that it is a very powerful learning methodology. Students develop cognitive and behavioral skills very quickly. They can soon approach a real-life managerial situation with a maturity that suggests several years of experience.

There are problems, however, with expanded use of ICL. These relate to student preparation, faculty commitment, and administrative adjustments.

Students frequently express frustration when they first encounter ICL. Most students have progressed through a typical educational system where knowledge is divided into arbitrary disciplines and taught to them through lectures, discussion sessions, or some

combination. The students have learned to memorize information and regurgitate it on multiple choice/ true-false or essay - problem examinations. This is a teacher-centered model of education with teacher and/or textbook structuring all dimensions of learning. The teacher takes responsibility for student learning.

ICL is student-centered. Students are expected to take responsibility for their own learning. The teacher does not tell them the "right answer." The teacher lets them experiment and make mistakes. The teacher makes them go to original sources to get information. The teacher does not even answer their questions directly. They are expected to find their own answers.

This creates a very ambiguous situation for students. "What are we supposed to do?" " How do we do that?" "If you would only tell me what you want, I would do it." These are the types of statements we frequently hear. The situation is often most difficult for students who have been particularly good students in the didactic learning environment. They have functioned well under an external locus of control where their life was structured for them, and perceive being forced into a more internal locus of control as very threatening.

Thus, a great deal of coaching is required as students make the transition into ICL. Students must be helped and encouraged as they start to take responsibility. Rather than just giving an assignment, the teacher must work with the students as they take their first halting steps into an ill-structured problem/situation. Rather than giving them a direct answer to a question, the teacher should talk them through the process of answering their own question. If coached effectively through the transition, all but the most regimented of students make the transition and eventually thrive in the new learning environment.

A more difficult problem for students is attempting to balance the two different learning environments simultaneously. Students who have courses that are traditional didactic courses and courses using ICL at the same time tend to find themselves in conflict. Some students tend to focus on the more structured demands of the didactic courses and neglect the ICL courses, responding to the external control, instead of exercising internal control. others tend to rebel against what the see as the irrelevance and immaturity of the didactic courses and virtually ignore them in favor of the ICL courses.

There is no simple answer to this problem. It is tempting to suggest that all course work utilize a contextual learning approach, but it is unlikely that such an outcome will occur in the near future. Alternatively, the teacher using ICL must coach the students more closely, helping them learn to balance a set of conflicting demands. That. of course, is an important learning experience itself, one that is critical to future business leaders.

Like students, faculty have difficulty adjusting to ICL. Many faculty are not comfortable with the learning manager/ coaching role. Faculty have been trained to become experts in a narrow discipline and share their expertise with students and their professional colleagues. The role models most have been exposed to have emphasized telling students what they should know. The process of transitions into a different learning methodology is not simple. Further, many faculty have no interest in changing.

A related issue is the faculty time required for ICL. ICL is very time-consuming. A great amount of interaction is required with both individual students and small teams of students. Managing the learning situations and providing coaching both take time. For example, using ICL with a group of MBA students in a course that was one third of their course work required an average of almost four hours per day of interaction time with students. This was in addition to preparation and evaluation time. It obviously would have been much less time-consuming to meet the students for four hours per week in typical lecture-discussion format.

The combination of having to adopt an unfamiliar role and concern over the amount of time required discourages faculty from experimenting with ICL. Widespread adoption of problem-based or situated learning approaches such as ICL will require significant structural changes in the educational system, changes in both faculty load concepts and faculty reward systems. Otherwise, adoption of new learning methodology will proceed very slowly, pioneered by individual faculty with a strong commitment to student learning.

ICL also requires the development of learning materials tailored to the process. Although problem-situations may be somewhat similar to traditional cases, they go well beyond the typical case be emphasizing both the acquisition of information and the structuring

of the situation to permit analysis. In the older format, each of these activities is carried out by the casewriter and hence affords no opportunity for student learning of valuable skills.

Problem-situations, like cases, are often difficult to develop because of the non-availability of needed materials from companies and other sources not open to public scrutiny. These situations are also very time-consuming and sometimes expensive to put into finished form because of their complexity. Preparing a first-class learning vehicle is simultaneously challenging and frustrating, you are required to anticipate student learning patterns in a simulation of reality.

While the effective use of ICL does not yet require special physical facilities, it is becoming apparent that standard instructional arrangements are inadequate. As students shift back and forth from small groups to large groups, now requiring a room with audio-visual facilities and later needing an interactive conference setting, the assignment of an ICL course to a single classroom of any fixed design does not do justice to the learning process. Some version of open classroom setting coupled with sophisticated workstations at the disposal of each student would seem to be the classroom of the future.

CONCLUSIONS

Integrated Contextual Learning is a powerful method of instruction which has evolved to meet the needs of an increasingly complex society and the managers who must make that society work. It restored a vision of apprenticeship at a time when study after study concludes that talking about uninteresting material to large numbers of people in a cloistered environment is largely a waste of everyone's time and effort. We believe that the emphasis on student learning in a realistic setting with maximum involvement in the process produces a superior graduate equipped to deal with the ambiguous, dynamic, and challenging world of tomorrow. The positive benefits of growth in self-confidence and ability far outweigh the inevitable frustrations of having to think for oneself, to learn from failure, and to take responsibility for one's actions.

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